1 Switches and Dimmers with Measurement and Local Control

Device types from the D2-01-XX group share the same telegram definitions – see the profile D2-01-00 (http://tools.enocean-alliance.org/EEPViewer/profiles/D2/01/00/D2-01-00.pdf). There are several messages distinguished by the *Command ID* data field. Each type supports only certain commands and functions, e.g. type 0x02 has one dimmable output, type 0x12 has two relay outputs without dimming function or type 0x0B supports energy and power measurements.

The gateway creates a universal interface for all device types from the D2-01-XX group, regardless of the features supported by a particular type.

For a clearer overview of supported features, than the one in D2-01-00, see the definition of D2-01-17 (http://tools.enocean-alliance.org/EEPViewer/profiles/D2/01/17/D2-01-17.pdf).

See also the video about pairing with gateway (the video was taken with BACnet version):
https://www.youtube.com/watch?v=kFMYFyDAUnc&ab_channel=FIRVENA

Following text supposes a NodOn 2-Channel Relay Switch (EEP D2-01-12) assigned to channel 1.

1.1 Overview

1.1.1 Incoming data

In **RX objects**, two messages (telegrams) are available, **status and measurement report**:

Ch 1 D2-01-12 Electronic Switches and Dimmers, Type 0x12 (04-2B-EA-F8)

Object ID	Value Name	Range	Value
AI 100	Command ID	4:Status Response;7:M…	4:Status Response
AI 101	I/O channel (STATUS)	0…31	1
AI 102	Output value	0…127 %	100%
AI 103	Power Failure	0:Disabled / not suppo…	0:Disabled / not supported (PFD=0)
AI 104	Over current switch off	0:Ready / not supporte…	0:Ready / not supported
AI 105	Error level	0:Hardware OK;1:Har…	3:Not supported
AI 106	Local control	0:Disabled / not suppo…	1:Enabled
AI 107	I/O channel (MEASUREMENT)	0…31	0
AI 108	Unit	0:Energy [Ws];1:Energ…	0:Energy [Ws]
AI 109	Measurement value (MSB)	0…65535	0
AI 110	Measurement value (LSB)	0…65535	0
AI 190	Telegram counter	0…65535	7
AI 191	Telegram age	0…65000 s	63s

CMD4 – status

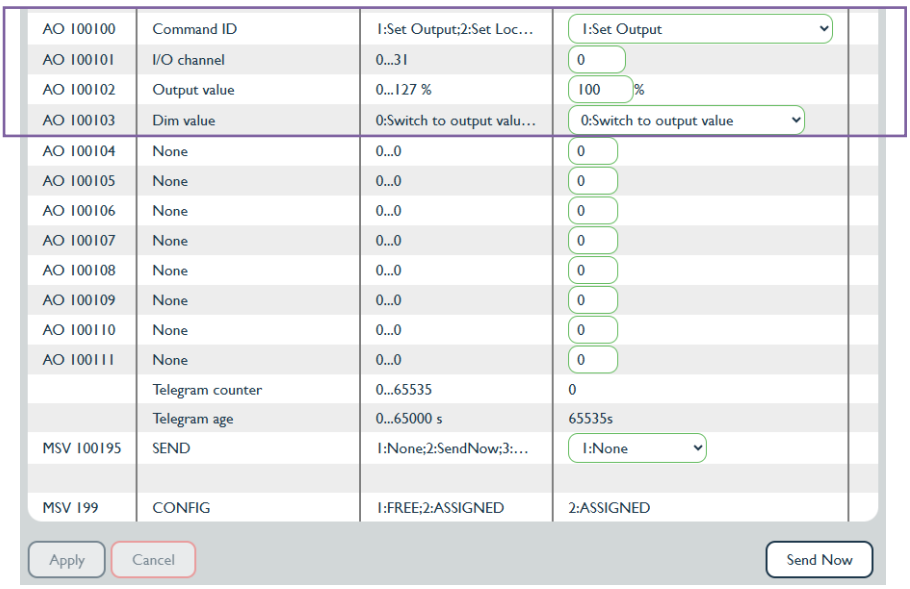
CMD7 – measurement

Objects A101…A106 contain data from the status message CMD 4, objects A107…A110 contain data from the measurement message CMD 7. The object AI100 indicates which CMD was received last. EEP D2-01-12 does not support measurements, so only AI100…AI106 are used.

1.1.2 Outgoing data

In **TX objects** AO100100...AO100111, you prepare data of the message (telegram) you want to transmit, the object **SEND** (MSV100195) is then used to transmit it.

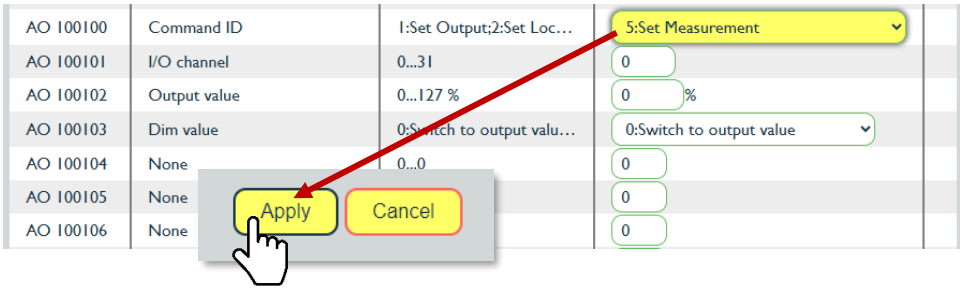
There are several different telegrams identified by **Command ID**, which is always at the first position (TX object AO100100). The meaning of TX objects AO100101 up changes based on that **Command ID** value (see the table in [Edit channel > Values] for value names, object ID). The default command is CMD1:



CMD1 – set output

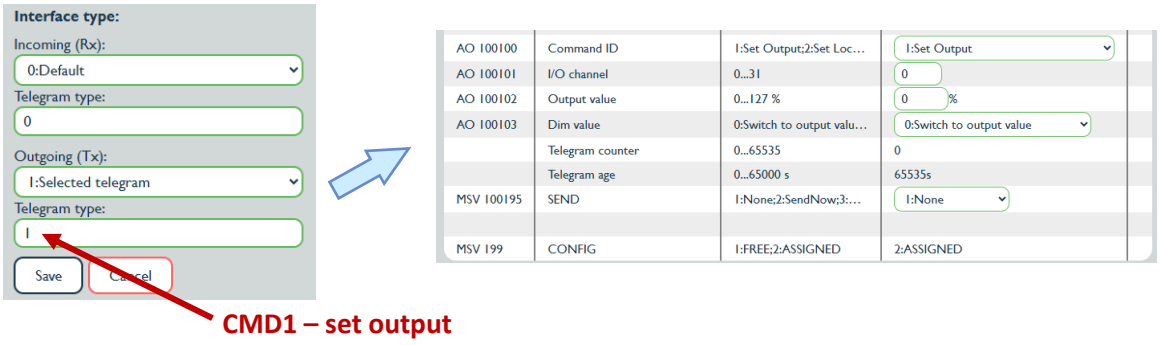
Some devices have two or more outputs, here the **I/O Channel** value is used.

In the **Web UI** [Edit channel > Values], outgoing data table, change of the **Command ID** must be confirmed by "Apply" before other values are entered:



1.1.3 Interface type

To use a single command type, you can configure **Interface type** in [Edit channel > Settings]:



CMD1 – set output

Unused objects are hidden, changing *Command ID* (AO100100) will cause object creation/deletion.

1.2 Switching ON/OFF

Contents of the objects:

Object	Value	Name	Description
AO100100	1	Command ID	Message type Set Output
AO100101	0	I/O Channel	This is command for output channel 1; value 30 (0x1E) controls all channels
AO100102	0/100% (OFF/ON)	Output Value	Any value 1…100% switches on
AO100103	0	Dim Value	Command for dimmer (not supported by D2-01-12)
AO100104…AO10114	0		Not used

SEND:

Write a telegram to the AO objects and write MSV100195 = 2 (SendNow) => telegram will be sent.

Or you can set MSV100195 = 13 (OnWriteV2) for example, then the relay switch can be switched ON/OFF by writing object AO100102 only, the command will be sent whenever the TX object AO100102 is written.

The response should appear in the RX objects (*Telegram counter* incremented and *Telegram age* reset to zero when a telegram is received).

Testing in the **Web UI** [Edit channel > Values]: set values and click “Send Now” to send a telegram: